



## MMI 291 Seminar Series

Current Theme: Interdisciplinary

Research Fall Quarter 2019 – CRN 51546



**Friday Seminar – 12:10-1 p.m.**

**“Stealing from the Host: Molecular Mechanisms and Ramifications of Horizontal Gene Transfer into Poxviruses”**

### Research

The Rothenburg lab focuses on the interaction between viruses and the immune system of their hosts. We are especially interested in how these interactions influence the host range and virulence of viruses. In related projects, we are elucidating how poxviruses evolve on the genomic level in order to adapt to new hosts and how they acquire novel genes from their hosts. We are harnessing this knowledge to engineer poxviruses with enhanced capabilities to selectively destroy cancer cells and to create proteins with enhanced antiviral activity that will help to prevent the transmission of viruses from animals to humans and to other animals.

### Publications

Peng, C., Haller, S. L., Rahman, M. M., McFadden, G. and Rothenburg, S. (2016). Myxoma virus M156 is a specific inhibitor of rabbit PKR but contains a loss-of-function mutation in Australian virus isolates. *Proc. Natl. Acad. Sci. USA*. 113(14): 3855-3860.

Park C., Peng, C., Brennan, G. and Rothenburg, S. (2019) Species-specific inhibition of antiviral protein kinase R by capripoxviruses and vaccinia virus. *Ann. N. Y. Acad. Sci.* 1438(1):18-29.

Rothenburg, S. and Brennan, G. (2019) Species-specific host-virus interactions: Implications for viral host range and virulence. *Trends Microbiol.* S0966-842X(19)30220-3

# November 22



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School of Medicine  
University of California

**November 22, 2019  
12:10 – 1 p.m.  
GBSF 1005**

Medical Microbiology &  
Immunology  
School of Medicine

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We hope to see you there!